Abstract of the Disclosure

The present invention processes a sample while suppressing film deposition generated during plasma processing and fogging on a measurement window caused by etching to stably detect floating contaminants in a processing chamber with an improved contaminant capture rate. A particle detector is provided in the processing chamber except for a space defined between electrodes of the plasma generator or a portion above the platform in which the plasma is generated. Laser light for scanning is emitted from the measurement window to the processing chamber, so that the particle detector detects scattered light from contaminants present in the processing chamber. The particle detector detects contaminants based on the detected scattered light during operation of the processing apparatus.